



Australian Government

ICTIOT501 Install IoT devices and networks

Release: 1

ICTIOT501 Install IoT devices and networks

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to install IoT (Internet of Things) devices and networks, including connecting, programming and testing the networks and devices for functionality against a given performance objective.

It applies to those in roles including software developers, programmers or network engineers, working as embedded systems engineers, IoT developers or senior software developers, and who have basic knowledge of electrical engineering.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Internet of Things (IoT)

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to install devices	1.1 Establish and confirm IoT device and network task requirements 1.2 Determine and document different environmental factors in which sensors and IoT devices will be deployed 1.3 Gather and document IoT device programming requirements according to business need 1.4 Determine and document organisational IoT security requirements 1.5 Determine remaining networking, software and installation architecture requirements 1.6 Lodge documentation according to organisational

	requirements
2. Install devices	2.1 Install required networks according to technical specifications 2.2 Connect IoT devices to network according to specifications 2.3 Configure required sensors and determine operational needs aligned to specifications
3. Finalise device installation	3.1 Test connectivity of networks against technical specifications 3.2 Test device connectivity against specifications 3.3 Determine and document required system upgrades according to organisational requirements 3.4 Lodge documentation according to organisational requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	Monitors outcomes of decisions, considering results and identifying key concepts and principles that may be adaptable in the future
Numeracy	Uses mathematical formulae to calculate required equipment, undertake measurements and determine response times
Oral communication	Articulates information and requirements, using effective communication techniques and industry standard technical language intended for audience and environment
Reading	Interprets technical, manufacturer and organisational documentation to determine and confirm job requirements
Writing	Prepares required documentation expressing ideas requirements and recommendations for specific audiences according to organisational procedures
Planning and organising	Uses a formal, logical planning processes together with an increasingly intuitive understanding of context
Problem solving	Analyses context to recognise anomalies and subtle deviations to normal expectations, focusing attention and remedying problems as they arise
Self-management	- Takes end-to-end responsibility for identifying and considering relevant organisational protocols and requirements - Uses systematic processes, setting goals, gathering required

SKILL	DESCRIPTION
	information and identifying and evaluating options against agreed criteria
Technology	• Demonstrates an understanding of principles, concepts, language and practices associated with the digital world

Unit Mapping Information

No equivalent unit. New unit.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTIOT501 Install IoT devices and networks

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- connect at least three IoT devices to an IoT network.

In the course of the above, the candidate must:

- check and test environmental factors affecting connectivity of devices.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- functions and features of industry standard network and platforms that support IoT devices and components
- language uses required for installing IoT devices and networks
- functions and uses industry standard hardware and software tools relating to installing IoT devices and networks
- different environmental impacts and contexts relating to where and how IoT devices are used
- IoT security considerations and their impact
- testing and debugging methodologies and techniques required to test software, hardware and environmental impacts.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- tools, equipment, materials, hardware required to install and test an IoT network to devices
- industry standard software packages relevant to installing IoT devices and networks
- organisational, technical and manufacturer procedures and documentation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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